ZEC030025-US

OIPE IAP14
SEP 2 1 2006
PATENT & TRADEMARK OFFICE

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Kejing GAO, et al
Serial No.: 10/686,029 Group No.: 1755
Filed: October 15, 2003 Examiner.: James W. Pasterczyk
For: CATALYST COMPONENT FOR ETHYLENE POLYMERIZATION, A PROCESS FOR PREPARING THEREOF AND CATALYST COMPRISING THE SAME

Attorney Docket No.: U 014853-1

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION UNDER 37 CFR 1.132

I, GAO Kejing, declare as follows:

1. I am co-inventor of the invention described and claimed in the above US patent application. I make this declaration is support of the application. I have first hand knowledge of the facts described herein.

2. The following experimentation was conducted by me or under my direct supervision and control to supplement the experimentation described in the specification of the above application in the Examples 1-6 and Comparative Examples 1-3 on pages 12-22.

Comparative Example 4

A catalyst solid component was prepared by the steps of:

(1) About 12 g of spheric silica (XPO2485 Grade, available from Grace Company, USA) was activated at 600°C under nitrogen atmosphere for 4 hours;

(2) Under nitrogen atmosphere, to a high temperature dried reactor equipped with a stirrer were successively charged with 8.0 g of heat activated silica obtained from the step (1), 100 ml of purified hexane and 2.8 ml of $Al(C_2H_5)_3$ solution in hexane (2.0 mmol/ml), and the mixture was stirred at ambient temperature for 45 minutes;

(3) At ambient temperature, to the reactor was added dropwise 19.0ml of dibutyl magnesium solution in heptane (1 mmol/ml), and then the reaction mixture was stirred for further 1 hour;

(4) While stirring and at ambient temperature, 2.4 ml of Cl_3CCH_2OH was added dropwise to the reactor, and then the reaction mixture was heated to 55℃ and stirred for further 1 hour;

(5) To the reactor was added dropwise 1.2 ml of titanium tetrachloride, and then the reaction mixture was heated to 68℃ and stirred for further 1 hour, followed by being cooled to ambient temperature, next, the stirrer was stopped and supernatant was removed;

(6) 100ml of hexane was added thereto, and after stirring for 10 minutes, supernatant was removed;

(7) Step (6) was repeated for one time;

(8) The reaction mixture was heated to 70℃ and dried by allowing high purification nitrogen gas passing through the reactor to obtain free flowing brown solid powders.

The catalyst solid component was evaluated in slurry polymerization under the same polymerization conditions as that in Example 1, and the results of polymerization were shown in below Table in comparison with the polymerization results of the catalyst components from Example 5 and Example 6.

Ex. No.	Ratio of Partial Pressure ($H_2/C_2^=$: 0.28/0.75)		Ratio of Partial Pressure ($H_2/C_2^=$: 0.60/0.43)	
	Activity (gPE/g cat)	Bulk Density (g/cc)	Activity (gPE/g cat)	Bulk Density (g/cc)
Comparative Example 4	2901	0.34	651	0.32
Example 5	3042	0.40	1450	0.36
Example 6	3781	0.41	1947	0.39

3. I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity or the application of any patent issued thereon.

Date: September 1, 2006

KAO Kejing
Name: